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Guidelines and Procedures for Implementation of Executive Order on Seismic Safety

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Interagency Committee on Seismic Safety in Construction

Sponsored by:
**Federal Emergency Management Agency
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U.S. DEPARTMENT OF COMMERCE, C. William Verity, *Secretary*
NATIONAL BUREAU OF STANDARDS, Ernest Ambler, *Director*

ABSTRACT

The "Earthquake Hazards Reduction Act of 1977," Public Law 95-125, was passed by Congress to foster the reduction of life and property risks from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. A proposed Executive Order on Seismic Safety has been drafted that would implement the provisions of the Act by requiring Federal preparedness and mitigation activities to be implemented. The required activities would include the development and promulgation of specifications, building standards, design criteria, and construction practices for new and existing buildings and lifelines.

The guidelines and procedures described herein have been prepared to support the implementation of the Executive Order on Seismic Safety. It is intended that these guidelines and procedures support the efforts of those agencies that will have to establish risk-assessment and corrective action programs to bring them into compliance with the requirements of Public Law 95-125.

It is recommended that each agency concerned with buildings and lifeline that are Federally owned, leased, assisted, or regulated designate an individual or an operating unit as the Agency Seismic Coordinator. It would be the responsibility of the Agency Seismic Coordinator to coordinate all aspects of the agency seismic safety program.

Key Words; Agency Seismic Coordinator; buildings; earthquake hazard; Executive Order on Seismic Safety; Federal agencies; lifelines; seismic safety.

1.0 INTRODUCTION

The "Earthquake Hazards Reduction Act of 1977" (Public Law 95-125) was promulgated by Congress to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. A proposed Executive Order has been drafted by the Interagency Committee on Seismic Safety in Construction (ICSSC) that would implement the provisions of the Act by requiring Federal preparedness and mitigation activities to be implemented. Mitigation activities would include "development and promulgation of specifications, building standards, design criteria, and construction practices for new and existing structures." The act also requires the examination of alternative provisions and requirements for reducing earthquake hazards through Federal and Federally financed construction, loans, loan guarantees, and licenses."

A copy of the draft Executive Order on Seismic Safety, along with a chart showing an overview of the requirements of the Executive Order are included in Appendix A of this document.

The guidelines and procedures described herein have been prepared to support the implementation of the Executive Order on Seismic Safety. It is acknowledged that some of the Federal agencies affected by the Executive Order already have well established earthquake hazards reduction programs and do not require additional guidelines to assist in the implementation of the provisions of the above mentioned act. It is intended that these guidelines and procedures support the efforts of those agencies that will have to establish risk-assessment and corrective action programs to bring them into compliance with the requirements of Public Law 95-125.

2.0 SCOPE

The scope of these implementation guidelines and procedures parallels the scope of the Executive Order on Seismic Safety. Included are: (a) new and existing Federally-owned buildings and lifelines; (b) building spaces leased for Federal occupancy; (c) Federal Domestic Assistance programs for buildings and lifelines and; (d) Federally-regulated buildings and lifelines. These recommendations are aimed at program administrators and agency personnel who are or will be responsible for administering, writing and revising rules, regulations, policies and procedures to mitigate earthquake hazards.

3.0 RESPONSIBLE FOCAL POINT

To assure adequate implementation of the Executive Order on Seismic Safety, it is recommended that each agency concerned with buildings and lifelines that are Federally owned, leased, assisted, or regulated designate an individual as the Agency Seismic Coordinator. The Agency Seismic Coordinator would be assigned the responsibility of coordinating all aspects of the agency seismic safety program. It is recognized that some agencies already have one or more persons or in some cases an operating unit assigned the responsibility of coordinating seismic safety activities as they pertain to buildings and lifelines. Such existing assignments are considered consistent with the concept of each agency having a responsible focal point for its seismic safety

activities. In other cases, the assignment of an Agency Seismic Coordinator will constitute an additional set of duties. As warranted, the Agency Seismic Coordinator may also serve as the agency's representative to the Interagency Committee on Seismic Safety in Construction (ICSSC). The Agency Seismic Coordinator should: (1) be cognizant of all agency building and lifeline programs falling under the scope of the Executive Order; (2) participate in developing agency seismic safety implementation plans; (3) monitor the execution and results of the agency's efforts in upgrading seismic safety; (4) recommend seismic safety programmatic changes, as required; (5) document the agency's rationale and results regarding risk analysis and cost effectiveness studies which form the basis for the agency's seismic safety decisions; (6) act as a focal point for the agency in maintaining necessary seismic safety records, documents, and statistical information, and (7) provide those reports to the Federal Emergency Management Agency, as required by Section 5 of the Executive Order.

4.0 IMPLEMENTATION PROCEDURES

Program implementation procedures are described below for the respective building and lifeline categories.

4.1 NEW AND EXISTING FEDERALLY OWNED BUILDINGS AND LIFELINES

4.1.1 Scope of Application

Section 1 of the Executive Order on Seismic Safety defines a building as a structure, fully or partially enclosed, used or intended for sheltering persons or property. A lifeline is a system providing the functions of a public utility or transportation facility (electrical power and communications; oil and gas pipelines; transportation facilities; dams; and water and sewage facilities). New buildings and lifelines initiated subsequent to the issuance of the Executive Order are to be designed and constructed in accordance with appropriate seismic design and construction standards as specified by the Executive Order [Section 1a; 1c]¹. For existing Federal buildings and lifelines, an earthquake risk assessment program shall be established and a mitigation program developed to schedule and correct those risks deemed unacceptable [Section 1b; 1d]. Existing Federal buildings do not include buildings acquired through foreclosure or similar action and intended to be resold or transferred to a new Federal entity [Section 1b]. All construction of new Federal buildings and lifelines affected by the Executive Order on Seismic Safety shall be constructed in accordance with the appropriate seismic design and construction standards as specified by the Executive Order [Section 3a].

4.1.2. Program Implementation

The Agency Seismic Coordinator should coordinate the review of pertinent

¹Sections shown in brackets refer to sections of the Executive Order - Refer to Appendix A for Draft Executive Order.

procurement documents (i.e. specifications, design and as-built drawings, and calculations) to assure consistency with the seismic safety requirements of the Executive Order.

Existing Federally-owned buildings and lifelines under the purview of the agency should be inventoried and a methodology should be adopted or developed to assist in the evaluation of their earthquake resistance and to define acceptable levels for earthquake resistance. The agency's performance criteria should include definitions of acceptable levels of safety and what constitutes excessive risk.

The results of the agency's building and lifeline seismic review should be documented and the documentation maintained by the Agency Seismic Coordinator. Adequately safe buildings and lifelines will be so identified. The buildings and lifelines posing excessive risks should be rank-ordered as to risk and consequences and an implementation plan developed to bring these buildings and lifelines up to an acceptable level of earthquake resistance. The Agency Seismic Coordinator should monitor the building and lifeline upgrading plan and be cognizant of the upgrading schedule and status. Those buildings and lifelines which, for any reason, cannot be made adequately safe should be identified for removal from service. Documentation obtained during the evaluation process and a summary of the decision-making process should be filed with the Agency Seismic Coordinator.

4.1.3. Reporting

The Agency Seismic Coordinator should use building and lifeline census data, documentation, and other information supplied by the agency to prepare reports relating the seismic safety status of the agency's Federally-owned buildings and lifelines. These reports should become a part of the agency's seismic safety report that may be requested by the Federal Emergency Management Agency in accordance with Section 5 of the Executive Order.

4.2 SPACE LEASED FOR FEDERAL OCCUPANCY

4.2.1. Scope of Application

Section 2.a of the Executive Order pertains to both new construction built by a non-Federal organization for lease to a Federal agency for a specific term and existing buildings that are being leased for Federal occupancy.

4.2.2 Program Implementation

According to Section 2.a.1 of the Executive Order, a Federal agency arranging for the construction of a privately-owned building for eventual lease to the Government for Federal occupancy shall specify that the building be constructed according to a set of seismic safety requirements that are at least equivalent to those that would be specified for a new Federally-owned building. Local building codes determined to be acceptable by the Federal agency shall be used and augmented when necessary to achieve appropriate seismic design standards.

Design and construction information regarding new non-Federally-owned buildings constructed for lease to the Federal Government should be reviewed and maintained by the Agency Seismic Coordinator.

According to Section 2.a.2 of the Executive Order, seismic safety shall be included in the criteria for selecting among alternative leasing spaces in existing buildings. It is understood that the sites of existing buildings may vary over a broad spectrum, ranging from those localities where buildings are fully compliant with requisite seismic safety standards to areas where none of the buildings meets the Federal seismic standards because the local codes have inadequate or no seismic safety requirements. In implementing the Executive Order for selecting existing buildings to be leased for Federal occupancy, the agency should indicate its degree of compliance with the intent of the Executive Order by documenting its building selection process, including the factors considered and the weighting applied to the factors. Information regarding the seismic safety of leased buildings for Federal occupancy should be reviewed and maintained by the Agency Seismic Coordinator.

4.2.3. Reporting

The Agency Seismic Coordinator should use building census data, documentation, and other information supplied by the agency to prepare reports relating the seismic safety status of the agency's leased space in non-Federally-owned buildings. These reports should become a part of the agency's seismic safety report that may be requested by the Federal Emergency Management Agency in accordance with Section 5 of the Executive Order.

4.3 FEDERAL DOMESTIC ASSISTANCE PROGRAMS

4.3.1. General

Federal Domestic Assistance Programs are generally in the form of grants, loans, and loan guarantees. Definitive programs are listed in the publication "Catalog of Federal Domestic Assistance, 1985." Definitions of the specific types of assistance have been extracted by the authors from the catalog and are presented in Appendix B of these guidelines. Selected portions of the index of the catalog of Federal Domestic Assistance Programs are also presented in Appendix B to assist in identifying programs with possible earthquake-related components.

The following procedures apply to those Federal Domestic Assistance Programs which may be covered by the scope of Section 2.b of the Executive Order on Seismic Safety.

4.3.2. Determination of Applicability

Agencies providing grants, loans, and loan guarantees under Federal Domestic Assistance should first review each of their existing programs to determine the applicability of the Executive Order to the programs. New Federal Domestic Assistance programs, as well as previously evaluated programs that

are substantially changed, should subsequently be evaluated against the agency's applicability criteria.

Federal Domestic Assistance programs that clearly have no construction component for buildings or lifelines may be classified as "NON-APPLICABLE - NON CONSTRUCTION" and a list of such programs should be provided to the Agency Seismic Coordinator for review and maintenance.

Federal Domestic Assistance programs which have a construction component for buildings or lifelines should be further evaluated for priority ranking in accordance with the Executive Order, using degree of seismic hazard, human and functional risk elements and property cost considerations in the ranking criteria. Those programs in which the main thrust of the Federal domestic assistance is non-construction-oriented yet contain a minor building or lifeline construction component may be classified "NON-APPLICABLE - LOW RISK ASSESSMENT" after evaluation and documentation. An example might be a program that provides support in the form of a grant to upgrade educational opportunities for children attending school in rural one-room school houses. The grant might underwrite the cost of teacher education, book purchases, visual aid resources, and building renovation. Because this would not be primarily a construction grant and if the agency would consider the risk of loss from an earthquake to be small, the applicability determination for this program would be classified "NON-APPLICABLE - LOW RISK ASSESSMENT". A list of potentially non-applicable, low risk programs, along with the appropriate documentation should be submitted to the Agency Seismic Coordinator for review and certification of evaluation status.

Some Federal Domestic Assistance Programs for buildings and lifelines are specifically excluded by virtue of Section 2.b of the Executive Order. These include repairs and renovations to existing buildings and lifelines where the remodeling costs are equal to or less than 50% of the fair market value of the existing building or lifeline prior to the occurrence of an earthquake. Also, on loan guarantees for existing buildings, the Executive Order is not applicable in certain cases, as the seismic safety provisions are not intended to be a condition for transfer of Federally-insured mortgages from the present owner to a new owner. After review, those assistance programs which clearly are excluded from the Executive Order shall be classified "NON-APPLICABLE - EXECUTIVE ORDER EXCEPTION." A list of these programs, along with any applicable documentation, should be reviewed, certified, and maintained by the Agency Seismic Coordinator.

All other Federal Domestic Assistance programs would be classified "APPLICABLE" and subject to rank-ordering with respect to potential earthquake losses. A list of the "Applicable Federal Domestic Assistance programs, along with their seismic safety ranking should be submitted to the Agency Seismic Coordinator for review, certification and maintenance. Then, a planning effort should be conducted by the agency in cooperation with the Agency Seismic Coordinator to develop a detailed implementation plan.

In the seismic safety evaluation of its "Applicable" Federal Domestic Assistance programs, the agency should assign the classification of "APPLICABLE - EXEMPT" to those programs not likely to sustain substantial earthquake losses due to

the mitigating conditions such as: a) an acceptable level of seismic safety incorporated in the building or lifeline construction, b) the low seismic hazard for the area in which the programs are implemented, c) the invulnerable location of the building or lifeline or d) the non-critical nature of the function housed by the building or lifeline. This classification indicates that the agency should not have to make or implement any additional mitigation plans for the programs included therein. Complete documentation of the ranking process should be submitted to the Agency Seismic Coordinator for review and confirmation.

4.3.3. Program Implementation

Each agency should implement the Executive Order as it applies to its Federal Domestic Assistance programs as identified under the Determination of Applicability. Included in the implementation program should be a determination of the seismic hazards in various areas of the country as shown in American National Standards Institute Standard A58, Minimum Design Loads for Buildings and Other Structures, 1982, or subsequent maps adopted for Federal use. For those agencies that do not have the staff resources or budget to determine local building code equivalency in implementing the Executive Order, the Code Equivalency Document (see Section 4.3.4 of these Guidelines) may be used. Where the document indicates that no local codes exist or that the local codes contain no seismic provisions appropriate to the area, a nationally-recognized model code may be cited as a requirement for the grant, loan, or loan guarantee [Section 3.a]. Considering the mission of the agency and the resources available to monitor compliance, the agency should make reasonable attempts to assure compliance after all risks are assessed.

4.3.4 Code Equivalency Document

To aid in the implementation of the Executive Order, the Interagency Committee on Seismic Safety on Construction (ICSSC) should be responsible for the preparation of a Code Equivalency Document. This document should use standards identified in Section 3 of the Executive Order. The document would identify, by State, the building-code-enforcement jurisdiction. It should also contain details about local seismic requirements, on a county-by-county basis, including information such as:

1. Those areas of the United States where no seismic requirements are necessary. This list will generally include those areas falling in Seismic Zone 0.
2. Those areas of the United States which have adopted local codes that substantially meet the requirements cited in Section 3.a of the Executive Order.
3. For those areas not included in subparagraphs 1. and 2. above, the code or codes generally in use and recognized as being adequate for that area of the United States will be listed. This listing is to aid those agencies which do not have the technical resources to certify that a code equivalency requirement, with regard to seismic provisions, has been satisfied before making Federal

grants, loans, or loan guarantees. An agency, however, would not be bound by this listing of equivalent codes and would have the option of identifying other acceptable equivalent codes.

In developing the Code Equivalency Document, the ICSSC should use information furnished by those agencies that have established the equivalency of their seismic standards to the requirements of the Executive Order. Each agency, however, shall have the option to recognize this equivalency on a case-by-case basis. The Code Equivalency Document should be reviewed periodically by the ICSSC and updated as needed.

4.3.5. Reporting

The Agency Seismic Coordinator should use data, documentation and other information supplied by the agency to prepare seismic safety status reports on the various Federal Domestic Assistance programs under the agency's purview. These reports should become a part of the agency's seismic safety report that may be requested by the Federal Emergency Management Agency in accordance with Section 5 of the Executive Order.

4.4 FEDERALLY REGULATED BUILDINGS AND LIFELINES

4.4.1. General

Section 2.c of the Executive Order on Seismic Safety requires that Federal agencies responsible for regulating structural safety of buildings and lifelines specify the use of appropriate seismic design and construction standards for new buildings and lifelines. Highest priority shall be given to those buildings and lifelines in areas of high seismic hazard that by virtue of their function, location, or type of construction provide the highest potential for earthquake loss.

4.4.2. Program Implementation

The potentially affected agencies should review all of their regulatory programs to determine which, if any, are covered by the Executive Order. As a general guideline, all regulatory programs involving design and/or construction of buildings or lifelines should be subject to further evaluation. Those programs determined to be covered by the Executive Order should then be rank-ordered in accordance with Section 2.c of the Executive Order. The agency should require the licensees to conduct a systematic program for assessing earthquake risks. It should be the function of the Agency Seismic Coordinator to confirm the list of covered programs and to assure a repository for all of the appurtenant documentation. Moreover, the Agency Seismic Coordinator should review and obtain the agency's concurrence with the licensees' assessment program. As a conclusion to the risk-assessment program, the licensees should submit to the Agency Seismic Coordinator a schedule for the correction of mutually-agreed upon excessive risks.

Where, for some compelling reason, the above-mentioned requirements are impossible to meet, the licensee may formally request a waiver from the requirements. The waiver request should be accompanied by a well-documented explanation for the request. The Agency Seismic Coordinator should serve as liaison in the review process. If the agency grants a waiver to the licensee, the agency should fully document its decision-making process and provide a complete set of documentation to the Agency Seismic Coordinator for review and concurrence.

4.4.3. Reporting

The Agency Seismic Coordinator should use data, documentation, and other information supplied by the agency to prepare reports relating the seismic safety status of Federally-regulated buildings and lifelines under the agency's purview. These reports should become a part of the agency's seismic safety report that may be requested by the Federal Emergency Management Administration in accordance with Section 5 of the Executive Order.

[illegible]

*** Does not include buildings acquired through foreclosure or similar action and intended to be resold or transferred to a new Federal entity.**

Appendix A

PROPOSED EXECUTIVE ORDER

Seismic Safety of Federal and Federally Assisted or Regulated Construct

This order is issued by virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Earthquake Hazards Reduction Act of 1977, as amended (42 U.S.C. 7701 et seq.), which requires that Federal preparedness and mitigation activities are to include "development and promulgation of specifications, building standards, design criteria, and construction practices to achieve appropriate earthquake resistance for new and existing structures," and "an examination of alternative provisions and requirements for reducing earthquake hazards through Federal and federally financed construction, loans, loan guarantees, and licenses."

Section 1. Requirements for Earthquake Safety of Federal Buildings and Lifelines

The purposes of these requirements are to reduce risks to the lives of occupants of buildings owned by the Federal Government and to persons who would be affected by the failures of Federal buildings or lifelines in earthquakes, to improve the capability of essential Federal buildings and lifelines to function during or after an earthquake, and to reduce earthquake losses of public property, all in a cost-effective manner. A building means any structure, fully or partially enclosed, used or intended for sheltering persons or property. A lifeline means a system providing the functions of a public utility or transportation facility (electrical power and communications, oil and gas pipelines, transportation facilities, dams, and water and sewage facilities).

1.a New Federal Buildings

Each Federal agency responsible for the design and construction of each new Federal building shall ensure that the building is designed and constructed in accord with appropriate seismic design and construction standards. This requirement pertains to all building projects for which development of detailed plans and specifications is initiated subsequent to the issuance of the order. Seismic design and construction standards shall be adopted for agency use in accord with sections 3.a and 4.a of this order.

Section 1. continued

1.b Existing Federal Buildings

Each Federal agency having primary responsibility for ensuring the safety of existing Federal buildings shall plan, and shall initiate no later than three years subsequent to the issuance of this order, a systematic program for the assessment of earthquake-induced risks and for the determination and correction of excessive risks. Standards for the assessment, design and construction activities shall be adopted for agency use in accord with sections 3.a and 4.a of this order. The program shall give priority attention to areas of high seismic hazard and to buildings that by virtue of their occupancy or structural characteristics provide the highest potential for earthquake losses. As used in this section, "existing Federal building" does not include a building acquired by a Federal agency through foreclosure, deed in lieu of foreclosure, or similar action, and intended to be resold or transferred to a non-Federal entity.

1.c New Federal Lifelines

Each Federal agency responsible for the design and construction of each new Federal lifeline shall ensure that the lifeline is designed and constructed in accord with appropriate seismic design and construction standards. This requirement pertains to all lifeline projects for which development of detailed plans and specifications is initiated subsequent to the issuance of the order. Seismic design and construction standards shall be adopted for agency use in accord with sections 3.a and 4.a of this order.

1.d Existing Federal Lifelines

Each Federal agency having primary responsibility for ensuring the safety of existing Federal lifelines shall plan, and shall initiate no later than three years subsequent to the issuance of this order, a systematic program for the assessment of earthquake-induced risks and for the determination and correction of excessive risks. Standards for the assessment, design and construction activities shall be adopted for agency use in accord with sections 3.a and 4.a of this order. The program shall give priority attention to areas of high seismic hazard and to lifelines that by virtue of their nature, location, and/or type of construction provide the highest potential for earthquake losses.

Section 2. Federally Leased, Assisted or Regulated Buildings
 and Lifelines

The purposes of these requirements are to reduce risks to the lives of occupants of buildings leased for Federal uses or purchased or constructed with Federal assistance, to reduce risks to the lives of persons who would be affected by earthquake failures of federally assisted or regulated buildings and lifelines, and to protect public investments, all in a cost-effective manner.

2.a Space Leased for Federal Occupancy

2.a.1 Each Federal agency responsible for the construction and lease of a new or substantially improved building for Federal use shall ensure that the building is designed and constructed in accord with appropriate seismic design and construction standards. This requirement pertains to all leased building projects for which the agreement covering development of detailed plans and specifications is effected subsequent to the issuance of this order. Local building codes shall be used in design and construction by those concerned with such activities in accord with section 3.a of this order, and augmented when necessary to achieve appropriate seismic design and construction standards.

2.a.2 Each Federal agency responsible for the leasing or renewal of leasing of space for Federal use in an existing building shall, for leases or renewals effected subsequent to the issuance of this order, make seismic safety one of the factors to be considered in the selection among alternative spaces for leasing.

2.b Federal Domestic Assistance Programs

Each Federal agency assisting in the financing, through Federal grants or loans, or guaranteeing the financing, through loan or mortgage insurance programs, of newly constructed or acquired buildings or lifelines shall plan, and shall initiate no later than three years subsequent to the issuance of this order, measures consistent with section 3.a of this order, to assure appropriate consideration of seismic safety. Programs shall give priority attention to areas of high seismic hazard and buildings or lifelines that by virtue of their nature, location or type of construction provide the highest potential for earthquake losses. This section shall not apply to the financing of an existing one-to four-unit dwelling or to the financing of an existing

Section 2. continued

condominium or cooperative dwelling unit. This section shall apply to grant, loans, or loan guarantees for repairing or renovating existing buildings or lifelines only when the cost of repairing or renovating exceeds fifty percent of the fair market value before repairing or renovating of the existing building or lifeline.

2.c Federally Regulated Buildings and Lifelines

Each Federal agency with generic responsibility for regulating the structural safety of buildings or lifelines shall plan, and shall initiate no later than three years subsequent to the issuance of this order, to require use of appropriate seismic design and construction standards for new buildings or lifelines within the agency's purview, and to require entities regulated by agencies to conduct a systematic program for assessing earthquake-induced risks and scheduling the correction of excessive risks. Programs shall give priority attention to areas of high seismic hazard and to buildings or lifelines that by virtue of their nature, location or type of construction provide the highest potential for earthquake losses.

Section 3. Concurrent Requirements

3.a In accord with Office of Management and Budget Circular A-119 of January 17, 1980, entitled, "Federal Participation in the Development and Use of Voluntary Standards," nationally recognized private sector standards and practices shall be used for the purposes identified in sections 1 and 2 above unless the responsible agency finds that none is available meeting its requirements. The actions ordered herein shall consider the seismic hazards in various areas of the country to be as shown in American National Standards Institute Standard A58, Minimum Design Loads for Buildings and Other Structures, 1982 or subsequent maps adopted for Federal use in accord with this order. Local building codes determined by the responsible agency or by the Interagency Committee for Seismic Safety in Construction to provide adequately for seismic safety, or special seismic standards and practices required by unique agency mission needs may be used.

3.b All orders, regulations, circulars or other directives issued, and all other actions taken prior to the date of this order that meet the requirements of this order are hereby confirmed and ratified and shall be deemed to have been issued under this order.

Section 3. continued

3.c Nothing in this order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat, 148 and 149 42 U.S.C. 5145 and 5146), or for individual and family grants and temporary housing assistance programs performed pursuant to Sections 404 and 408 of the Disaster Relief Act of 1974 (88 Stat, 154, 42 U.S.C. 5174 and 88 Stat, 156, 42 U.S.C. 5178). Furthermore, this order shall apply to other provisions of the same act only after a Presidentially-declared major disaster or emergency resulting from an earthquake when actions are determined to be cost effective or when damages exceed fifty percent of the fair market value of a building.

Section 4. Responsibilities

4.a The Director, Federal Emergency Management Agency (FEMA), shall be responsible for reporting to the President on the execution of this order and providing support for the secretariat of the Interagency Committee on Seismic Safety in Construction (ICSSC). The ICSSC, using consensus procedures, shall be responsible to FEMA for the recommendation for adoption of seismic design and construction standards and practices required by Sections 1 and 2 of this order. Participation in ICSSC shall be open to all agencies with programs affected by this order. However, seismic design and construction guidelines for dams shall be as developed by the Interagency Committee on Dam Safety as part of the Dam Safety Program.

4.b As allowed by law, each agency shall issue or amend existing regulations or procedures to comply with this order within three years of its issuance, and plan for their implementation through its usual budget process. Thereafter, each agency shall review, at a period not to exceed three years, its regulations or procedures to assess the need to incorporate new or revised standards and practices.

Section 5. Reporting

The Federal Emergency Management Agency shall request, from each agency affected by this order, information on the status of its procedures, progress in its implementation plan and the impact of this order on its operations. FEMA shall include assessment of the execution of this order in its annual report of the National Earthquake Hazards Reduction Program to Congress.

Appendix A

COMMENTARY ON PROPOSED EXECUTIVE ORDER

Seismic Safety of Federal and Federally Assisted or Regulated Construction

The title is chosen to describe the objectives and scope of the proposed executive order, but to leave its legislative history to the preamble.

The legislative background for the proposed order and its objectives are presented. The proposed order defines actions to meet requirements of the National Earthquake Hazards Reduction Act of 1977. The only new responsibility is to develop and begin systematic efforts in three years, and this is new only for agencies that have not yet responded to the Act. Each agency alone is responsible for its actions in response to the proposed order. It is not the intent of the order to place new requirements on agencies that already have acted to meet the requirements of the National Earthquake Hazards Reduction Program(NEHRP).

Section 1. Requirement for Earthquake Safety of Federal Buildings and Lifelines

General definitions are given for buildings and lifelines. More specific definitions are appropriate to the standards that will be used to implement the order. The scope explicitly includes dam safety. Section 4.a assigns the Interagency Committee on Dam Safety the responsibility for developing dam safety guidelines, and gives responsibility for other standards and practices to the Interagency Committee on Seismic Safety in Construction. Cost effectiveness is cited as a criterion for seismic safety practices and programs. There is no complete safety. Seismic safety should be consistent among various building types, materials and locations, and consistent with safety from other hazards to life and property.

1.a New Federal Buildings

Responsibility for design and construction standards is assigned to the Federal agency responsible for the building. As noted in section 3.a, national standards are encouraged and adequate local codes may be used. Section 3.a does not require use of local codes because they may be deficient or unduly restrictive. The requirements of this section become effective upon issuance of the order for projects entering the stage of development of detailed plans and specifications.

1.b Existing Federal Buildings

Each Federal agency is given the responsibility for its own systematic programs of assessment and correction of excessive risks. The agency would give priority attention to situations of potentially high seismic hazard, define its own criteria for excessive risks (with the opportunity for cooperation in this through Interagency Committee on Seismic Safety in Construction, section 4.a), and omit from assessment buildings that by their occupancy, location or type of construction have been shown to provide small seismic risks.

1.c New Federal Lifelines

Seismic safety practices are required for new Federal lifelines for which development of detailed plans and specifications begins after issuance of this order. Use of national standards or agency-specific practices is allowed by reference to section 3.a.

1.d Existing Federal Lifelines

Each Federal agency is given the responsibility for its own systematic program of assessment and correction of excessive risks. The agency would give priority attention to situations of potentially high seismic hazard, define its own criteria for excessive risks (with the opportunity for cooperation in this through Interagency Committee on Seismic Safety in Construction and Interagency Committee on Dam Safety, section 4.a), and omit from assessment lifelines that by their nature, location or type of construction have been shown to provide small seismic risks.

Section 2. Federally Leased, Assisted or Regulated Buildings and Lifelines

Risks and cost effectiveness are cited as criteria for the actions. Again, seismic safety should be consistent among various building and lifeline types, materials and locations, and consistent with safety from other hazards to life and property.

COMMENTARY ON PROPOSED EXECUTIVE ORDER

2.a Space Leased for Federal Occupancy

Safety equivalent to that for new Federal buildings is required for whole buildings constructed and leased for Federal occupancy, but it is recognized that such buildings will be constructed primarily in accord with local codes. However, special provisions are required when local codes are deficient in seismic safety.

Seismic safety is only "a factor," among others, in the selection from among the existing buildings or spaces in existing buildings available for leasing.

2.b Federal Domestic Assistance Programs

This section is not intended to require assessment of the seismic safety of an existing home as a condition for transfer of a Federally insured mortgage from the present owner to a new owner. This section applies to grants, loans or loan guarantees for remodeling existing buildings, or renovating existing lifelines only when the cost of remodeling or renovation exceeds fifty percent of the fair market value of the building or lifeline.

2.c Federally Regulated Buildings and Lifelines

This section applies only to regulatory programs regulating for structural safety of buildings or lifelines, and places responsibilities on the licensees for design and construction of new buildings or lifelines, and assessment and correction of existing buildings or lifelines.

Section 3. Concurrent Requirements

3.a - In accord with OMB Circular A-119, nationally recognized voluntary standards are to be used when they meet an agency's programmatic requirements. A nationally-applicable seismic hazard map is cited to give specificity to earthquake hazards. The seismic hazard map of the Uniform Building Code is deemed equivalent in areas in which the Uniform Building Code is used. Local building codes may be used when they meet the safety levels of standards developed or adopted for Federal agencies.

3.b - This section is not intended to place additional requirements on Federal agencies, but to avoid losses of existing authorities.

COMMENTARY ON PROPOSED EXECUTIVE ORDER

Section 4. Responsibilities

This section provides for cooperation among Federal agencies, (through the Interagency Committee on Seismic Safety in Construction and the Interagency Committee on Dam Safety), using consensus procedures, to recommend for adoption seismic design and construction standards for Federal use.

Each agency is given the responsibility for its own seismic safety practices. A three-year cycle is established for review and update of such practices.

Section 5. Reporting

This section imposes no new reporting requirements on the Federal agencies, but gives FEMA the responsibility to assess and report on the effectiveness of this order.

APPENDIX B - FEDERAL DOMESTIC ASSISTANCE PROGRAMS

Definitions of Specific Types of Assistance

- a. Formula Grants - Allocations of money to States or their subdivisions in accordance with a distribution formula prescribed by law or administrative regulation, for activities of a continuing nature not confined to a specific project.
- b. Project Grants - The funding, for fixed or known periods, of specific projects or the delivery of specific services or products without liability for damages for failure to perform. Project grants include fellowships, scholarships, research grants, training grants, traineeships, experimental and demonstration grants, evaluation grants, planning grants, technical assistance grants, survey grants, construction grants, and unsolicited contractual agreements.
- c. Direct Payments for Specified Use - Financial assistance from the Federal government provided directly to individuals, private firms, and other private institutions to encourage or subsidize a particular activity by conditioning the receipt of the assistance on a particular performance by the recipient. This does not include solicited contracts for the procurement of goods and services for the Federal government.
- d. Direct Payments With Unrestricted Use - Financial assistance from the Federal government provided directly to beneficiaries who satisfy Federal eligibility requirements with no restrictions being imposed on the recipient as to how the money is spent. Included are payments under retirement, pension, and compensation programs.
- e. Direct Loans - Financial assistance provided through the lending of Federal monies for a specific period of time, with a reasonable expectation of repayment. Such loans may or may not require the payment of interest.
- f. Guaranteed/Insured Loans - Programs in which the Federal government makes an arrangement to indemnify a lender against part or all of any defaults by those responsible for repayment of loans.
- g. Insurance - Financial assistance provided to assure reimbursement for losses sustained under specified conditions. Coverage may be provided directly by the Federal government or through private carriers and may or may not involve the payment of premiums.
- h. Sale, Exchange, or Donation of Property and Goods - Programs which provide for the sale, exchange or donation of Federal real property, personal property, commodities, and other goods including land, buildings, equipment, food and drugs. This does not include the loan of, use of, or access to Federal facilities or property.

- i. Use of Property, Facilities, and Equipment - Programs which provide for the loan of, use of, or access to Federal facilities or property wherein the federally-owned facilities or property do not remain in the possession of the recipient of the assistance.
- j. Provision of Specialized Services - Programs which provide Federal personnel to directly perform certain tasks for the benefit of communities or individuals. These services may be performed in conjunction with nonfederal personnel, but they involve more than consultation, advice, or counseling.
- k. Advisory Services and Counseling - Programs which provide Federal specialists to consult, advise, or counsel communities or individuals, to include conferences, workshops, or personal contacts. This may involve the use of published information, but only in a secondary capacity.
- l. Dissemination of Technical Information - Programs which provide for the publication and distribution of information or data of a specialized technical nature frequently through clearinghouses or libraries. This does not include conventional public information services designed for general public consumption.
- m. Training - Programs which provide instructional activities conducted directly by a Federal agency for individuals not employed by the Federal government.
- n. Investigation of Complaints - Federal administrative agency activities that are initiated in response to requests, either formal or informal, to examine or investigate claims of violations of Federal statutes, policy, or procedure. The origination of such claims must come from outside the Federal government.
- o. Federal Employment - Programs which reflect the government-wide responsibilities of the Office of Personnel Management in the recruitment and hiring of Federal civilian agency personnel.

Appendix B

CATALOG OF FEDERAL DOMESTIC ASSISTANCE - 1985 AGENCY PROGRAM INDEX PROGRAMS WITH POSSIBLE EARTHQUAKE RELATED COMPONENTS

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DEPARTMENT OF AGRICULTURE

10.056 STORAGE FACILITIES AND EQUIPMENT LOANS

(Farm Facility Loans)

FEDERAL AGENCY: AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, DEPARTMENT OF AGRICULTURE

OBJECTIVES: To complement the commodity loan and grain reserve programs by providing financing for needed onfarm storage facilities, thereby affording farmers the opportunity for orderly marketing of their crops.

10.209 1890 RESEARCH FACILITIES

FEDERAL AGENCY: COOPERATIVE STATE RESEARCH SERVICE, DEPARTMENT OF AGRICULTURE

OBJECTIVES: To assist in the acquisition and improvement of research facilities and equipment.

10.404 EMERGENCY LOANS

FEDERAL AGENCY: FARMERS HOME ADMINISTRATION, DEPARTMENT OF AGRICULTURE

OBJECTIVES: To assist farmers, ranchers and aquaculture operators with loans to cover losses resulting from major and/or natural disasters; for annual farm operating expenses; and, for other essential needs necessary to return disaster victims' farming operations(s) to a financially sound basis in order that they will be able to return to private sources of credit as soon as possible.

USES AND USE RESTRICTIONS: The loans are used to finance the purchase of storage structures and to remodel existing grain storage facilities. To qualify for loans the farmers must meet the need eligibility requirements for storing one or more of the following commodities: barley, corn, grain sorghum, oats, wheat, and rice. Soybeans are eligible also on farms participating in the wheat or feed grain acreage reduction program. The maximum loan amount is \$25,000. A producer's aggregate outstanding loan balance cannot exceed \$25,000 unless the producer is participating in the grain reserve program at the time of application, then the aggregate may be increased but cannot exceed \$50,000. Repayment terms allow for a maximum of 4 equal annual installments over a period of 5 years. Interest rate charged on facility loans will be based on the rate charged COC by the U.S. Treasury during the month the loan is disbursed.

USES AND USE RESTRICTIONS: Moneys appropriated pursuant to Public Law 97-98, Section 1433, shall be used for the purchase of equipment and land, and the planning, construction, alteration or renovation of buildings to strengthen their capacity to conduct research in the food and agricultural sciences.

USES AND USE RESTRICTIONS: The loan may be used to repair, restore, or replace damaged or destroyed farm property (real and chattel) and supplies which were lost or damaged as a direct result of a natural disaster; provide annual production loans for borrowers who were indebted for emergency loans on December 15, 1979, for up to six full calendar years after the disaster to enable the disaster victims time to recover from their losses and return to conventional credit; under certain conditions, refinance secured and unsecured debts made necessary by the disaster; finance adjustments in the farming, ranching or aquaculture operations(s) determined necessary to restore or maintain applicants on a sound financial basis equivalent to their pre-disaster potential. The total amount of all loans for all purposes must not exceed the applicants repayment ability. The total of all actual loan losses is based on actual dollar values of production and physical losses, and they will be for: (1) disasters occurring on and after October 1, 1978, through September 30, 1981, all actual loan losses are made at 5 percent interest with a maximum limit of \$500,000 per disaster. (2) disasters occurring on and after October 1, 1981, all actual loan losses up to \$100,000 are at 5 percent interest and any amount over \$100,000 is at an 8 percent interest rate, with a maximum limit of \$500,000 per disaster. Any additional financing above the value of actual losses will be at a market rate of interest as established periodically by the Secretary of Agriculture. Applicants who suffered losses from disasters occurring after July 2, 1980, and who can obtain credit elsewhere may receive a loan(s) for actual losses only, at a market rate of interest based on the cost of Government

BUILDINGS

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DIRECT LOANS

LOAN GUAR.

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LIFELINES

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DIRECT LOANS

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